

# EUROPEAN PATENT OFFICE

## Patent Abstracts of Japan

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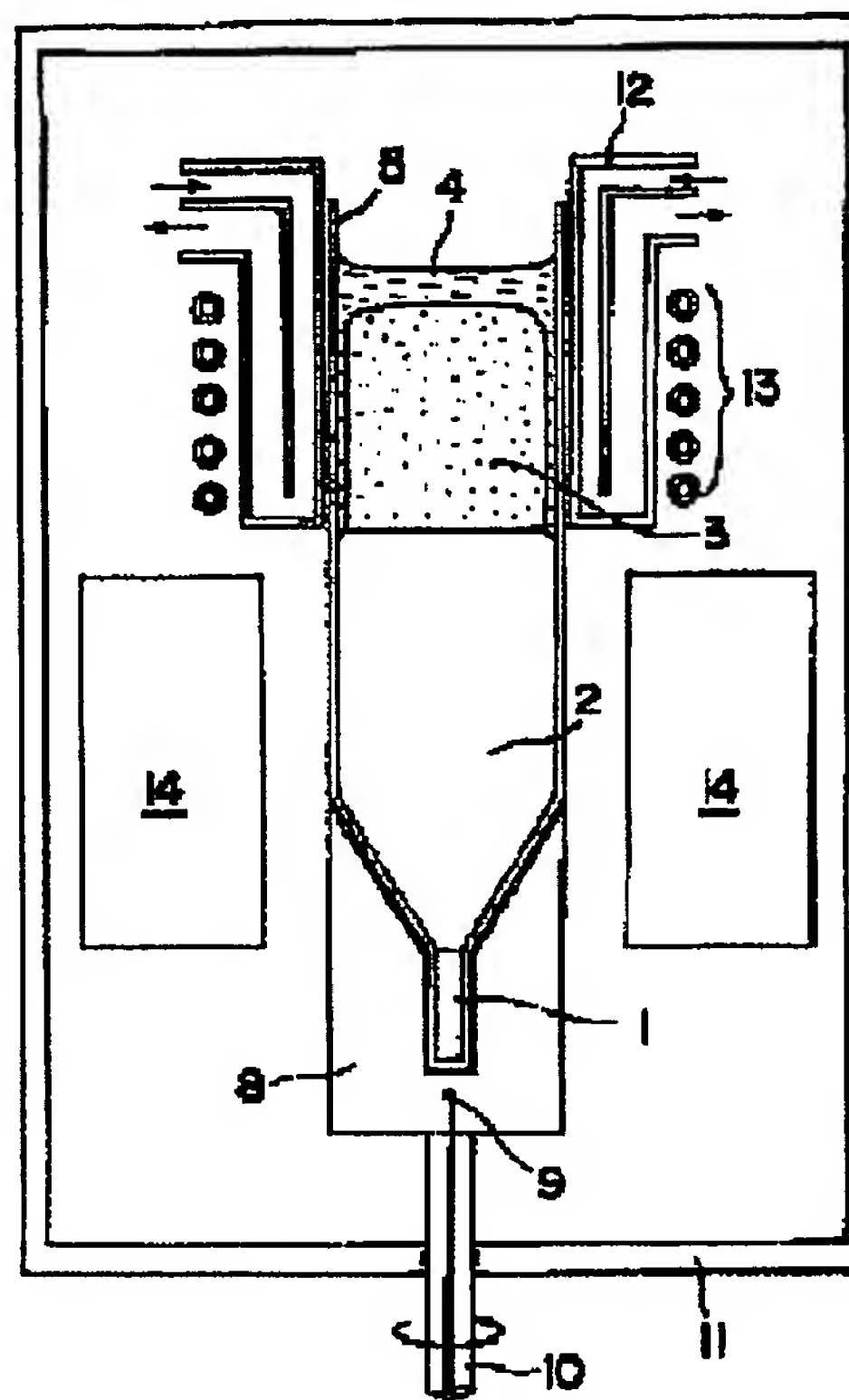
APPLICATION DATE : 09-02-93  
APPLICATION NUMBER : 05044681

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INVENTOR : OZAWA SHOICHI;

INT.CL. : C30B 11/00 C30B 27/00 H01L 21/208

TITLE : METHOD FOR PRODUCING  
COMPOUND SEMICONDUCTOR  
SINGLE CRYSTAL AND DEVICE  
THEREFOR



ABSTRACT : PURPOSE: To prevent the contact solidification with a vessel and to stably produce an excellent single crystals with high yield in a vertical crystal growing method by making a compound semiconductor molten liquid away from a vertical vessel without coming into contact with it and cooling it from below to solidify it.

CONSTITUTION: A vertical vessel 5 housing a compound semiconductor material and seed crystals 1 provided in contact with the material at the lower end is installed in a high pressure vessel 11. A conductive member 12 is provided around the side of the vertical vessel 5 and further the compound semiconductor material is melted and heated by high-frequency induction heating for which a high-frequency induction coil 13 is provided around the side of the conductive member 12. At the same time, after a molten liquid 3 is made away from the inner wall surface of the vertical vessel 5 by electromagnetic repulsive force between the molten liquid 3 and the conductive member 12 given electromagnetic induction, the compound semiconductor molten liquid is cooled and solidified from the lower end to produce the objective compound semiconductor single crystals.

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